Learning to Fly: The Wright Brother's Adventure			
2008 Science			
Grade and Course Level Expectations			
Missouri Science			
Grade 6			
Activity/Lesson	**State**	**Standards**	
The Society	MO	SCI.6.7.1.A.e	Recognize different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
The Society	MO	SCI.6.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
Meet the Wrights	MO	SCI.6.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
1901: The First Improvement	MO	SCI.6.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
1901: The First Improvement	MO	SCI.6.7.1.A.e	Recognize different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)

New Data	MO	SCI.6.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
New Data	MO	SCI.6.7.1.A.e	Recognize different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
New Data	MO	SCI.6.7.1.D.a.3	data tables (allowing for the recording and analysis of data relevant to the experiment, such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities)
Learning to Fly: The Wright Brother's Adventure			
2008 Science			
Grade and Course Level Expectations			
Missouri Science			
Grade 7			
Activity/Lesson	**State**	**Standards**	
The Society	MO	SCI.7.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
The Society	MO	SCI.7.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)

Meet the Wrights	MO	SCI.7.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
1901: The First Improvement	MO	SCI.7.2.2.A.a	Identify and describe the types of forces acting on an object in motion, at rest, floating/sinking (i.e., type of force, direction, amount of force in Newtons)
1901: The First Improvement	MO	SCI.7.2.2.D.a	Compare the effects of balanced and unbalanced forces (including magnetic, gravity, friction, push or pull) on an object's motion
1901: The First Improvement	MO	SCI.7.2.2.D.b	Explain that when forces (including magnetic, gravity, friction, push or pull) are balanced, objects are at rest or their motion remains constant
1901: The First Improvement	MO	SCI.7.2.2.D.c	Explain that a change in motion is the result of an unbalanced force acting upon an object
1901: The First Improvement	MO	SCI.7.2.2.D.d	Explain how the acceleration of a moving object is affected by the amount of net force applied and the mass of the object
1901: The First Improvement	MO	SCI.7.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
1901: The First Improvement	MO	SCI.7.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
New Data	MO	SCI.7.2.2.F.c	Explain how simple machines affect the amount of effort force, distance through which a force is applied, and/or direction of force while doing work
New Data	MO	SCI.7.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment

New Data	MO	SCI.7.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
New Data	MO	SCI.7.7.1.D.a.3	data tables (allowing for the recording and analysis of data relevant to the experiment, such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities)
1902: Success at Last	MO	SCI.7.2.1.A.c	Given an object in motion, calculate its speed (distance/time)
1902: Success at Last	MO	SCI.7.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
1903: Powered Flight	MO	SCI.7.2.1.A.d	Interpret a line graph representing an object's motion in terms of distance over time (speed) using metric units
1903: Powered Flight	MO	SCI.7.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
1904: Improvement in Dayton	MO	SCI.7.2.1.A.c	Given an object in motion, calculate its speed (distance/time)
1904: Improvement in Dayton	MO	SCI.7.2.2.A.a	Identify and describe the types of forces acting on an object in motion, at rest, floating/sinking (i.e., type of force, direction, amount of force in Newtons)
1904: Improvement in Dayton	MO	SCI.7.2.2.A.b	Compare the forces acting on an object by using a spring scale to measure them to the nearest Newton
Learning to Fly: The Wright Brother's Adventure			
2008 Science			
Grade and Course Level Expectations			
Missouri Science			

Grade 8			
Activity/Lesson	**State**	**Standards**	
The Society	MO	SCI.8.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
The Society	MO	SCI.8.8.1.A.a	Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth (e.g., new materials, freeze-dried foods, infrared goggles, Velcro, satellite imagery, robotics, lasers)
The Society	MO	SCI.8.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)
Meet the Wrights	MO	SCI.8.8.1.A.a	Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth (e.g., new materials, freeze-dried foods, infrared goggles, Velcro, satellite imagery, robotics, lasers)
Meet the Wrights	MO	SCI.8.8.2.A.a	Describe how the contributions of scientists and inventors, representing different cultures, races, and gender, have contributed to science, technology and human activity (e.g., George Washington Carver, Thomas Edison, Thomas Jefferson, Isaac Newton, Marie Curie, Galileo, Albert Einstein, Mae Jemison, Edwin Hubble, Charles Darwin, Jonas Salk, Louis Pasteur, Jane Goodall, Tom Akers, John Wesley Powell, Rachel Carson)

1901: The First Improvement	MO	SCI.8.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
1901: The First Improvement	MO	SCI.8.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
New Data	MO	SCI.8.7.1.A.b	Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment
New Data	MO	SCI.8.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
New Data	MO	SCI.8.7.1.D.a.3	data tables (allowing for the recording and analysis of data relevant to the experiment, such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities)
1902: Success at Last	MO	SCI.8.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)
1903: Powered Flight	MO	SCI.8.7.1.A.e	Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)

1903: Powered Flight	MO	SCI.8.7.1.B.c	Use a variety of tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, graduated cylinders, stopwatches)